AMENDMENT TO THE CLAIMS

Please cancel claims 41-91 without prejudice. Upon entry of the preliminary amendment, claims 1-40 are pending in the present application. The following listing of claims replaces all prior versions, and listings, of the claims in the present application, without prejudice:

1. (Original) A method of assembling a life science knowledge base comprising the steps of:

(a) generating two or more nodes indicative of life science data using a life science taxonomy;

(b) assigning to one or more pairs of nodes a representation descriptor, the representation descriptor corresponding to a relationship between a pair of nodes;

(c) assembling two or more nodes and one or more representation descriptors assigned to one or more pairs of said two or more nodes into an electronic database such that at least one of said two or more nodes is joined to a another node by a representation descriptor.

2. (Original) The method of claim 1 further comprising the step of receiving life science data, wherein the step of generating two or more nodes is based at least in part on said received life science data.

3. (Original) The method of claim 2, wherein the step of receiving life science data comprises collecting said life science data using a software agent.

4. (Original) The method of claim 2, wherein the step of receiving life science data further comprises receiving one or more of metadata and context data.

5. (Original) The method of claim 1, wherein said life science data comprises information representative of a molecule, biological structure, physiological condition, trait, phenotype, biological process, clinical data, medical data, or disease data and chemistry.

6. (Original) The method of claim 1, wherein said life science data comprises a descriptor of the condition, location, amount, or substructure of a molecule, biological structure, physiological condition, trait, phenotype, biological process, clinical data, medical data, or disease data and chemistry.

7. (Original) The method of claim 1, wherein the step of generating two or more nodes comprises reformatting at least a portion of said life science data.

8. (Original) The method of claim 1, wherein one or more of the representation descriptors correspond to a epistemological relationship between a pair of nodes.

9. (Original) The method of claim 1, wherein one or more of the representation descriptors comprise a case frame.

10. (Original) The method of claim 1 further comprising the step of providing an ontology for use with representation descriptors, wherein the step of assigning to one or more pairs of nodes a representation descriptor is based on said ontology.

11. (Original) The method of claim 1, further comprising the step of segregating said electronic database into two or more sectors such that access may be restricted to one or more selected sectors.

12. (Original) The method of claim 1, wherein at least one of the two or more nodes itself represents a representation descriptor.

13. (Original) An article of manufacture having a computer-readable program carrier with computer-readable instructions embodied thereon for performing the method of claim 1.

14. (Original) A system for assembling a life science knowledge base comprising:

(a) a data collector configured to receive life science data and to generate nodes based on said life science data;

(b) a relationship generator configured to assign a relationship descriptor to a pair of nodes, the representation descriptor corresponding to a relationship between a pair of nodes; and

(c) a knowledge assembler configured to assemble two or more nodes and one or more representation descriptors assigned to one or more pairs of said two or more nodes into an electronic database such that at least one of said two or more nodes is joined to another node by a representation descriptor.

15. (Original) The system of claim 14 further comprising a graphical user interface configured to permit a user to query the electronic database at least on the relationship between at least two nodes.

16. (Original) The system of claim 14 further comprising a data input interface configured to permit a user to submit life science data to the data collector.

17. (Original) The system of claim 16, wherein the data input interface is further configured to permit a user to assign a representation descriptor to a pair of nodes in the electronic database.

18. (Original) The system of claim 14 further comprising an access manager configured to restrict access of a user to one or more portions of the electronic database. 19. The system of claim 14 further comprising a software agent in electronic communication with the data collector, wherein the software agent is configured to collect life science data.

20. (Original) The system of claim 14, wherein said life science data comprises information representative of a molecule, biological structure, physiological condition, trait, phenotype, biological process, clinical data, medical data, or disease data and chemistry.

21. (Original) The system of claim 14, wherein said life science data comprises a descriptor of the condition, location, amount, or substructure of a molecule, biological structure, physiological condition, trait, phenotype, biological process, clinical data, medical data, or disease data and chemistry.

22. (Original) The system of claim 14 further comprising a library of machine readable representation descriptors in electronic communication with the relationship generator.

23. (Original) The system of claim 14, wherein one or more of the representation descriptors correspond to a epistemological relationship between a pair of nodes.

24. (Original) The system of claim 14, wherein one or more of the representation descriptors comprise a case frame.

25. (Original) The system of claim 14, wherein one or more of the nodes represents a representation desctiptor.

26. (Original) A computer program product comprising:

an electronic database storing a plurality of case statements, each case statement comprising;

an first object identifier;

a relationship connector; and

a second object identifier

wherein the relationship connector is based on a life science ontology.

27. (Original) The product of claim 26, wherein a set of said case statements define a biological function.

28. (Original) The product of claim 27, wherein the biological function comprises a chemical reaction.

29. (Original) The product of claim 27, wherein the biological function comprises transport.

30. (Original) The product of claim 27, wherein the biological function comprises digestion of a biomolecule.

31. (Original) The product of claim 26, wherein at least one of the first and second object identifiers identifies a biomolecule.

32. (Original) The product of claim 26, wherein at least one of the first and second object identifiers identifies a biological function.

33. (Original) The product of claim 26, wherein at least one of the first and second object identifiers identifies a relationship connector.

34. (Original) The product of claim 26, wherein a the relationship connector represents an identity relationship.

35. (Original) The product of claim 26, wherein a the relationship connector represents a product relationship.

36. (Original) The product of claim 26, wherein a the relationship connector represents a substrate relationship.

37. (Original) The product of claim 26, wherein a the relationship connector represents a enzymatic relationship.

38. (Original) The product of claim 26 further comprising a graphical user interface configured to permit a user to query the database at least on the relationship between biological object identifiers.

39. (Original) The product of claim 26 further comprising a data input interface configured to permit a user to create case statements.

40. (Original) The product of claim 26 further comprising an access manager configured to restrict access of a user to one or more portions of the electronic database.

41-91. (Cancelled)